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CENTRAL FAX CENTER****OCT 26 2006**Docket No.: 21736-00011-US  
(PATENT)**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Peter C. Cramton et al.

Application No.: 09/740,930

Confirmation No.: 7304

Filed: December 21, 2000

Art Unit: 3628

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For: SYSTEM AND METHOD FOR THE  
EFFICIENT CLEARING OF SPECTRUM  
ENCUMBRANCES

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Examiner: F. Poinvil

**APPEAL BRIEF**MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed with respect to the Notice of Appeal filed in this case on August 1, 2006, an accompanying request for one month extension of time makes the brief timely .

The fees required under § 41.20(b)(2) are dealt with in the accompanying  
TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

I.	Real Party In Interest			
II	Related Appeals and Interferences			
III.	Status of Claims			
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V.	Summary of Claimed Subject Matter			
VI.	Grounds of Rejection to be Reviewed on Appeal			
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X. Related Proceedings  
Appendix A Claims

I. REAL PARTY IN INTEREST

The real party in interest in this appeal are the inventors:

Lawrence M. Ausubel, Peter C. Cramton and Paul R. Milgrom.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. There are 54 claims pending in the application.

B. Current Status of Claims

1. Claims 1-50 have been canceled.
2. There are no claims withdrawn from consideration but not canceled.
3. The pending claims are claims 51-104.
4. None of the claims have been allowed.
5. Claims 51-104 are subject to the outstanding rejection.

C. Claims On Appeal

The claims on appeal are claims 51-104.

IV. STATUS OF AMENDMENTS

Applicant did not file an Amendment After Final Rejection. In the preparation of this Brief, Applicant has discovered that amendments are required in claims 52, 64, 65, 96 and 101 to

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correct obvious errors. This brief treats those amendments as if made, although the claim appendix shows the current state of the claims. The proposed amendments are shown below:

52. (Proposed amendment) The method of claim 51 wherein the first auction is a computer-implemented auction and occurs at the same time as the second auction.

64. (Proposed amendment) The method of claim 63 wherein the first auction is a computer-implemented auction and occurs at the same time as the second auction.

65. (Proposed amendment) The method of claim 63 wherein the first auction is a computer-implemented auction and occurs after the second auction.

96. (Proposed amendment) The ~~method~~ system of claim 87 wherein each item in the first set is complementary to an item in the second set.

100. (Proposed amendment) A system for conducting a first auction of a first set of items, and a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in both the auctions, the system comprising:

- a) means for initiating the first auction by identifying the first set of items,
- b) means for initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) means for inputting bids from bidders for items in the first set of items in the first auction,
- d) means for constraining the inputted bids in the first auction by accepting only bids which satisfy a constraint based on bids for the second set of items in the second auction,
- e) means for determining whether the first auction should terminate,
- f) means for repeating c), d) and e) until the first auction is terminated, and
- g) means for assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

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## V. SUMMARY OF CLAIMED SUBJECT MATTER

This application relates to auction technology and more particularly to either, conducting one auction which has a relationship to another auction or conducting two auctions where at least one of the auctions is related to the another of the auctions. Even more specifically the rejected claims relate to processing bids in one auction based on either the bids in a related auction or the outcome of related auction.

The specification describes that conducting two auctions may be useful when the items in one auction are complementary to items in another auction. The specification describes that "Good A and good B are said to be *complements* when they are most usefully consumed or produced together." (1:25-27)<sup>1</sup> The specification continues:

"A severe example of complements, which motivates much of the following discussion, is created when a government sells licenses for encumbered telecommunications spectrum. For example, at this writing, the Federal Communications Commission (FCC) is planning to sell new communications licenses in the 700 MHz band in FCC Auction No. 31, currently scheduled for March 2001. Because of its location in the electromagnetic spectrum and its excellent propagation characteristics, the 700 MHz band is ideally suited for next generation (3G) mobile or high-speed broadband telecommunications services. Once deployed, these services will intensify competition for all communication services and yield tremendous benefit to the public. However, the 700 MHz band is the same spectrum currently allocated to UHF television channels 59-69, and some 100 television stations nationally currently operate in this band. Moreover, the current UHF television stations maintain the right to continue to broadcast on this frequency without interference until the end of the digital television (DTV) transition, currently scheduled to extend six or more years beyond the auction date for the new licenses.

This presents a fundamental economic problem. A buyer wishing to provide a new wireless service in the 700 MHz band needs two things: a new license from the FCC; and agreement from incumbent broadcasters in this band to clear the spectrum. The license and the clearing agreements are strong complements; each is of limited usefulness without the other. One can think of the license as a left shoe and the clearing agreements as a right shoe. What a buyer needs is a pair of shoes. The problem is that the government is only auctioning (and, indeed, only owns) left shoes; the right shoes are owned by many different broadcasters. An auction for left shoes by themselves is likely to attract little interest unless the winning bidders can be confident that they will also be able to acquire the corresponding right shoes.

Thus, if the new FCC licenses for the 700 MHz band are sold—as currently planned—in an auction that does not include agreements to clear, severe difficulties can

<sup>1</sup> Passages in the specification are cited as A:B, where A represents the page number and B represents a line number.

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be expected. Bidders in the FCC auction can anticipate that the obtaining of clearing agreements after the auction will be exceedingly costly, as the incumbent broadcasters will be in excellent bargaining positions to extract very high prices from the winners of the new FCC licenses. Moreover, failures in the bargaining process will likely result in many of the encumbrance issues not being resolved for many years, leading to vast underutilization of the spectrum. Understanding this, bidders in the FCC auction are likely to bid very low prices, so the federal government (and taxpayers) will likely receive vastly diminished auction revenues." (1:29-2:29)

The specification continues:

"The present invention is a system and method to sell or procure complementary goods. In one especially useful embodiment of the present invention, contracts with incumbent broadcasters to clear the spectrum are aggregated and/or partitioned to create "*clearing rights*" associated with communications licenses that are being auctioned. .... [C]learing rights ... are complementary goods with respect to the communications licenses .... It may enable the bidders in a spectrum auction to bid for clearing rights at the same time that they bid for the basic communications licenses. It may further enable them to make their bids on the clearing rights conditional on winning the basic licenses. This gives the bidders the confidence to bid according to their true economic values for the spectrum. It also minimizes the possibility that post-auction bargaining failures will lead to the inefficient clearing of the spectrum. Thus, the present invention provides the advantage of improving the economic efficiency of the auction or market mechanism over the prior art." (3:1-15)

The application includes independent method claims 51, 63, 99 and 101 and independent apparatus claims 75, 87, 100, 102, 103 and 104.

Some claims (claims 51, 63, 75 and 87 and their dependent claims) are directed at a method or a system for conducting an auction of a first set of items, where the auction is "conducted in association with a second auction of a second set of items, said first set of items being different from said second set of items". (4:7-9) Other claims (99-104) are directed to a method or a system for conducting a first auction of a first set of items and a second auction of a second set of items, where "said first set of items being different from said second set of items". (5:26-6:3)

In one group of claims (claims 51, 75, 99, 100 and 103 and the claims dependent thereon) the first auction, for the first set of items, has a feature of "constraining the received bids by accepting only bids which satisfy a constraint based on bids in the second auction". The specification describes:

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"In a second preferred embodiment, the present invention comprises an *unlinked auction*, described generally as follows. Again, a private company conducts a clearing auction at the same time that the FCC conducts the primary auction. Participating bidders are permitted to concurrently place bids on clearing rights in the clearing auction. Bids are not rigidly linked to bids in the primary auction, but bids for the clearing rights are nevertheless **constrained** to satisfy some mathematical relationship relative to bids for the basic communications licenses. **One exemplary constraint for the unlinked auction is a simple greater-than-or-equal-to-one relationship. For every bid in the primary auction, a participating bidder is obligated to bid at least an equal sum for the clearing rights.** Winners of the primary auction win the basic licenses, and winners of the clearing auction win the clearing rights. Optionally, the obligation of a winning bidder of the clearing auction to purchase the clearing rights may be made conditional on whether the bidder has won the associated basic license in the primary auction." (4:7-18, emphasis added, see also 15:25-16:2)

"Figure 7 is a flow diagram of an "unlinked auction" process in accordance with one embodiment of the present invention. The process starts with step 302, in which memory locations at the computer are initialized. In step 302, the appropriate memory locations are initialized with information such as the clearing rights (or, generally, second objects) for auction and the initial minimum acceptable bids. In step 304, the computer outputs auction information, including the current minimum acceptable bids ( $P_1^i, \dots, P_m^i$ ) for clearing rights. In step 306, the computer receives bids ( $P_1^i, \dots, P_m^i$ ) for clearing rights from bidders. In step 308, the computer closes the bidding for the current round and processes bids. **In step 310, the computer adjusts the bids based on the bidding history of the related auction for complementary licenses, and using the constraint on bids that defines the unlinked auction. This step is shown in greater detail in Figure 8.**" (16:29-17:9, emphasis added)

"Figure 8 is a flow diagram of the process of step 310. It begins with step 310-1, in which the bidding history of the related auction for complementary licenses is inputted or accessed. In step 310-2, a set  $S_k$  that has not yet been considered, but which is part of a provisionally-winning bid in the related auction, is selected. In step 310-3, for the set  $S_k$  currently selected, it is determined whether the provisional winner of set  $S_k$  in the related auction is also a participant in the unlinked auction. If the provisional winner of set  $S_k$  is not a participant in the unlinked auction, then the process skips to step 310-6 where another set  $S_k$  is selected. If the provisional winner of set  $S_k$  is a participant in the unlinked auction, then the process continues with step 310-4. **In step 310-4, for the set  $S_k$  currently selected, it is determined whether the provisional winner of set  $S_k$  in the related auction has placed a bid in the unlinked auction that satisfies the constraints of the unlinked auction.** If the provisional winner of set  $S_k$  in the related auction has placed a bid in the unlinked auction satisfying the constraints of the unlinked auction, then the process skips to step 310-6 where another set  $S_k$  is selected. If the provisional winner of set  $S_k$  in the related auction has not placed a bid in the unlinked auction satisfying the constraints of the unlinked auction, then the process proceeds to step 310-5. In step 310-5, the

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computer adjusts the bids in the unlinked auction, by inserting a bid for set  $S_k$  in the smallest amount  $P_k$  satisfying the constraints of the unlinked auction. The inserted bid of  $P_k$  is placed on behalf of the provisional winner of set  $S_k$  in the related auction. In step 310-6, it is determined whether all sets  $S_k$  that are part of provisionally-winning bids in the related auction have been considered. If not, the process loops back to step 310-2. If all sets  $S_k$  that are part of provisionally-winning bids in the related auction have been considered, then the process returns to step 312 in Figure 7." (17:28-18:18, emphasis added)

The remaining claims (including independent claims 63, 87, 101, 102 and 104, and the claims dependent thereon) are directed at conducting an auction which includes "accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction". The auction further includes "eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force subsequent to the eliminating of the conditional bids which fail to satisfy any of their conditions".

The specification describes:

"The present invention is a system and method to sell or procure complementary goods. In one especially useful embodiment of the present invention, contracts with incumbent broadcasters to clear the spectrum are aggregated and/or partitioned to create "clearing rights" associated with communications licenses that are being auctioned. In this embodiment, the present invention is a system and method to offer clearing rights that are complementary goods with respect to the communications licenses, facilitating the efficient clearing of spectrum encumbrances. It may enable the bidders in a spectrum auction to bid for clearing rights at the same time that they bid for the basic communications licenses. **It may further enable them to make their bids on the clearing rights conditional on winning the basic licenses.** This gives the bidders the confidence to bid according to their true economic values for the spectrum. It also minimizes the possibility that post-auction bargaining failures will lead to the inefficient clearing of the spectrum. Thus, the present invention provides the advantage of improving the economic efficiency of the auction or market mechanism over the prior art." (3:3-15, emphasis added)

"In a second preferred embodiment, the present invention comprises an *unlinked auction*, described generally as follows. Again, a private company conducts a clearing auction at the same time that the FCC conducts the primary auction. Participating bidders are permitted to concurrently place bids on clearing rights in the clearing auction. Bids are not rigidly linked to bids in the primary auction, but bids for the

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clearing rights are nevertheless constrained to satisfy some mathematical relationship relative to bids for the basic communications licenses. One exemplary constraint for the unlinked auction is a simple greater-than-or-equal-to-one relationship. For every bid in the primary auction, a participating bidder is obligated to bid at least an equal sum for the clearing rights. Winners of the primary auction win the basic licenses, and winners of the clearing auction win the clearing rights. **Optionally, the obligation of a winning bidder of the clearing auction to purchase the clearing rights may be made conditional on whether the bidder has won the associated basic license in the primary auction.**" (4:6-18, emphasis added)

"Figure 7 is a flow diagram of an "unlinked auction" process in accordance with one embodiment of the present invention. The process starts with step 302, in which memory locations at the computer are initialized. In step 302, the appropriate memory locations are initialized with information such as the clearing rights (or, generally, second objects) for auction and the initial minimum acceptable bids. In step 304, the computer outputs auction information, including the current minimum acceptable bids ( $P_1', \dots, P_m'$ ) for clearing rights. In step 306, the computer receives bids ( $P_1^i, \dots, P_m^i$ ) for clearing rights from bidders. In step 308, the computer closes the bidding for the current round and processes bids. **In step 310, the computer adjusts the bids based on the bidding history of the related auction for complementary licenses, and using the constraint on bids that defines the unlinked auction.** This step is shown in greater detail in Figure 8. In step 312, the computer determines whether the bidding should continue beyond the current round. In many of the preferred embodiments, this determination is simply based on whether the related auction of complementary licenses has terminated. If, at step 312, the computer determines that the related auction of complementary licenses has not terminated—and so the bidding for clearing rights should continue—then the process goes to step 314, in which the computer determines new provisional winners and provisionally-winning prices ( $P_1, \dots, P_m$ ). The process then goes to step 316 in which the computer revises the current minimum acceptable bids ( $P_1', \dots, P_m'$ ) and generates the bidding history and any auction announcements and messages. The process then loops to step 304.

If, at step 312, the computer determines that the related auction of complementary licenses has terminated—and so the bidding for clearing rights should also end—then the process proceeds to step 318. **At step 318, clearing rights (or, generally, second objects) are assigned to the most recent provisional winners, at the most recent provisionally-winning prices.** After step 318, the market mechanism process ends.

Two preferred embodiments of the unlinked auction—one related to the simultaneous multiple round auction format used by the FCC and one related to some combinatorial auction formats proposed for the FCC—follow the same description as in the section, above, on the linked auction (in the two paragraphs immediately following the detailed description of Figure 3).

Figure 8 is a flow diagram of the process of step 310. It begins with step 310-1, in which the bidding history of the related auction for complementary licenses is



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inputted or accessed. In step 310-2, a set  $S_k$  that has not yet been considered, but which is part of a provisionally-winning bid in the related auction, is selected. In step 310-3, for the set  $S_k$  currently selected, it is determined whether the provisional winner of set  $S_k$  in the related auction is also a participant in the unlinked auction. **If the provisional winner of set  $S_k$  is not a participant in the unlinked auction, then the process skips to step 310-6 where another set  $S_k$  is selected.** If the provisional winner of set  $S_k$  is a participant in the unlinked auction, then the process continues with step 310-4. In step 310-4, for the set  $S_k$  currently selected, it is determined whether the provisional winner of set  $S_k$  in the related auction has placed a bid in the unlinked auction that satisfies the constraints of the unlinked auction. If the provisional winner of set  $S_k$  in the related auction has placed a bid in the unlinked auction satisfying the constraints of the unlinked auction, then the process skips to step 310-6 where another set  $S_k$  is selected. If the provisional winner of set  $S_k$  in the related auction has not placed a bid in the unlinked auction satisfying the constraints of the unlinked auction, then the process proceeds to step 310-5. **In step 310-5, the computer adjusts the bids in the unlinked auction, by inserting a bid for set  $S_k$  in the smallest amount  $P_k$  satisfying the constraints of the unlinked auction. The inserted bid of  $P_k$  is placed on behalf of the provisional winner of set  $S_k$  in the related auction. In step 310-6, it is determined whether all sets  $S_k$  that are part of provisionally-winning bids in the related auction have been considered. If not, the process loops back to step 310-2. If all sets  $S_k$  that are part of provisionally-winning bids in the related auction have been considered, then the process returns to step 312 in Figure 7.**

One exemplary constraint of the unlinked auction is a simple greater-than-or-equal-to inequality: for each bid in the related auction of communications licenses, there is required to be a corresponding bid at least as large in the unlinked auction for clearing rights. At step 310-4, for the set  $S_k$  currently selected, it is determined whether the provisional winner of set  $S_k$  in the related auction has placed a corresponding bid at least as large in the unlinked auction. If not, then at step 310-5, the computer would insert a bid in the unlinked auction for set  $S_k$  in an amount equal to the provisionally-winning bid for set  $S_k$  in the related auction. The inserted bid is placed on behalf of the provisional winner of set  $S_k$  in the related auction." (16:29-18:26, emphasis added)

Thus, in all the claims, the auction of the first set of items (first auction) depends, at least in part, on a different auction, the second auction. In some claims (51, 75, 99, 100 and 103 and the claims dependent thereon), the bids are constrained by bids in the second auction. In other claims (63, 87, 101, 102 and 104, and the claims dependent thereon), the bids may be conditioned on the outcome of the second auction.

Each of the independent claims 51, 63, 75 and 87 has 11 dependent claims.

In dependent claims 52, 64, 76 and 88 the first and second auctions occur at the same time. (4:19-32)

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In dependent claims 53, 65, 77 and 89 the first auction occurs after the second auction.  
(4:19-23)

In dependent claims 54, 66, 78 and 90 the items in the second set (second auction) are communication licenses and the items in the first set are clearing rights related to the communication licenses. (3:3-15; 6:19-20)

In dependent claims 55, 67, 79 and 91 the items in the first set are communication licenses and the items in the second set are clearing rights related to the communication licenses.  
(3:3-15; 6:19-20)

In dependent claims 56, 68, 80 and 92 the items in the second set are related to airport landing rights. (6:21-22)

In dependent claims 57, 69, 81 and 93 the items in the first set are related to airport landing rights. (6:21-22)

In dependent claims 58, 70, 82 and 94 each item of the first set is related to an item in the second set. (8:1-5)

In dependent claims 59, 71, 83 and 95 each item in the first set is assigned to the successful bidder for the related item in the second set. (17:18-22)

In dependent claims 60, 72, 84 and 96 each item in the first set is complementary to an item in the second set. (8:1-5)

In dependent claims 61, 73, 85 and 97 the first auction is terminated when no new bids are submitted, and new bidding information is provided to bidders in the event that the auction is not terminated. (10:24)

In dependent claims 62, 74, 86 and 98 items are only assigned to selected bidders.  
(original claim 6)

Claims 75, 83, 85, 87, 95, 97 100 and 102 are written as provided for in 35 USC §112, 6<sup>th</sup> paragraph.

All the means clauses read on components of the Bidding Information Processor 10 of Fig 1 and 2 or the Bid Entry Terminal 20a of Fig. 1; these components are described at 7:25-9:5.

Clause 75a, 87a, 100a and 102a call for "means for initiating the first auction by identifying the first set of items". Fig 7 includes functions 302 and 304 which are the initial steps in conducting an auction, see 16:29-17:5.

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Clauses 75b, 87b, 100c and 102c call respectively for:

75b) means for inputting bids from bidders for items in the first set of items,

87b) means for inputting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,

100c) means for inputting bids from bidders for items in the first set of items in the first auction,

102c) means for accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction.

Function 306 (Fig. 7) receives bids from bidders, 17:4-5. In at least one embodiment the clearing rights are bid for at this function. It is the bids for clearing rights which may be made "conditional", 4:6-18.

Clauses 100b and 102b call for "means for initiating the second auction by identifying the second set of items and accepting bids therefor". In at least one embodiment the "second" auction deals with the licenses for which the clearing rights are complementary. Auctions for licenses are conducted in accordance with Fig. 3. Functions 204 and 206 initiate the auction and receive the bids, see 10:15-21.

Clauses 75c and 100d call for "means for constraining ...bids by accepting only bids which satisfy a constraint, based on bids for the second set of items in the second auction". In step 310 "the computer adjusts the bids based on the bidding history of the related auction for complementary licenses, and using the **constraint** on bids that defines the unlinked auction. This step is shown in greater detail in Figure 8." (17:6-8, emphasis added)

Clauses 75d, 87c, 100e and 102d recite "means for determining whether the first auction should terminate". Step 312 provides for the determination as to when the first auction should end, 17:18-20.

Clauses 75e, 87d, 100f and 102e call for a repeating certain steps until the first auction is terminated. In some cases the repeated steps which are identified are inputting bids and

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determining when to terminate, in other cases a constraining function is also performed. The flow chart of fig. 7 shows that these effects are achieved in the loop from the "No" exit of step 312, via functions 314, 316, 304, 306, 310 and 312; see 17:3-17.

Clauses 87e and 102f call for "eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force subsequent to the eliminating of the conditional bids which fail to satisfy any of their conditions." Step 310 (fig. 7) "adjusts bids based on the bidding history of related auction". As stated elsewhere "the obligation of a winning bidder of the clearing auction to purchase the clearing rights may be made conditional on whether the bidder has won the associated basic license in the primary auction." (4:15-18) Adjusting for the identity winning bidder in the related auction results in elimination of bids by bidders other than the winning bidder.

Claims 85 and 97 recites that "the means for determining terminates the first auction in the event that no new bids were submitted and further includes means for providing new bidding information to bidders in the event that the first auction is not terminated". The specification (10:23-30) provides "In many of the preferred embodiments, this determination [to terminate an auction] is simply based on whether any acceptable new bids were submitted in the current round. If, at step 210, the computer determines that one or more acceptable new bids were submitted in the current round—and so the bidding should continue—then the process goes to step 212, in which the computer determines new provisional winners and provisionally-winning prices ( $P_1, \dots, P_m$ ). The process then goes to step 214 in which the computer revises the current minimum acceptable bids ( $P'_1, \dots, P'_m$ ) and generates the bidding history and any auction announcements and messages. The process then loops to step 204."

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## VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

There is only one rejection stated in the Final Rejection. All claims are rejected as obvious over the Rackson patent 6,415,270 in view of the Fritts publication entitled "Private Property, Economic Efficiency, and Spectrum Policy and the Wake of the C Block auction."

## VII. ARGUMENT

Summary of the Argument

All the rejected claims patentably distinguish from the subject matter disclosed in the art relied on as well as the subject matter dealt with in the rejection. More particularly the claims include subject matter which is not described in either reference. The subject matter of some claims (63, 87, 101, 102, 104 and their dependent claims) call for an auction which features conditional bids. The rejection does not even *allege* that the claimed subject matter can be found in either reference. In the case of those claims the rejection *assumes* conditional bids are an auction feature found in the prior art.

There is an allegation of obviousness with respect to the remaining claims (directed at a "constraining" received bids by accepting only bids which satisfy a constraint based on bids in another auction); however the allegation is based on a misreading of the secondary reference. As a factual matter there is no pertinent teaching of this subject matter in either reference. There are additional grounds distinguishing the claims from the prior art relied on in the rejection.

Legal Principles

The Final Rejection is solely based on 35 USC §103.

"[A]ll words in the claim must be considered in judging the patentability of the claim against the prior art." *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970). As set forth in section 2111 of the MPEP, "claims are interpreted in the broadest reasonable fashion consistent with the specification." (Emphasis added). The Patent and Trademark Office is required to take into account whatever enlightenment is afforded by the specification, *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ 2d 1023, 1027-28 (Fed. Cir. 1997).

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As noted in Section 706.02(j) MPEP, three criteria must be met in order to establish a *prima facie* case of obviousness.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, there must be a reasonable expectation of success.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

Preambles that are essential to the claimed invention are limiting because they breathe life, meaning, and vitality into the claims. *Kropa v. Robie* 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951), *In re Stencel*, 828 F.2d 751, 4 USPQ2d 1071 (Fed. Cir. 1987).

#### **Construction of the Claims**

The application includes independent claims 51, 63, 75, 87, 99, 100, 101, 102, 103 and 104. The preamble of all of the claims refer to a first and second auction and the body of all of the claims also refers to the first and second auctions. Some claims are directed at conducting a first auction "in association with a second auction" (51, 63, 75, 87, and their dependent claims). The remaining claims (99, 100, 101, 102, 103 and 104) are directed at conducting a first and second auction.

The claims include subject matter related to conducting an auction such as:

"initiating the first auction,"

"receiving bids from bidders for items in the first set of items,"

"determining whether the first auction should terminate",

"assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated".

In addition, one group of the claims (51, 75, 99, 100, 103 and their dependent claims) refer to operating in the first auction by "constraining the received bids by accepting only bids

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which satisfy a constraint based on bids in the second auction” “Constrain” is defined as “to force by imposed stricture, restriction, or limitation”. The example in the specification (where the subject of the second auction are communication licenses and the subject of the first auction is the associated clearing rights, see fig. 8, step 310-4) determines whether the provisional winner in the second auction has placed a bid in the first auction which satisfies the appropriate “constraint”. No action need be taken in the event the appropriate bid has been made (the “yes” path from step 310-4 in fig. 8). In the event the appropriate bid has not been made, the bid is adjusted (step 310-5), i.e., forced “by imposed stricture”, to satisfy the constraint. Thus the subject of constraining bids is to impose or force the appropriate bid in the event it has not been made.

The remaining claims (63, 87, 101, 102, 104 and their dependent claims) refer in the preamble to a first auction of a first set of items and a second auction of a second set of items where “at least one item in the first set having a complementary item in the second set”. Complementary has been defined as “serving to fill out or complete”, or “mutually supplying each other's lack” or “being complements of each other.” Complements have been defined as “the quantity, number, or assortment required to make a thing complete”, or “one of two mutually completing parts”. One example used in the specification of complementary items are an encumbered communication license and the related clearing right. This pair is complementary in that the clearing right completes or makes whole the encumbered communication license by providing for the clearing of the encumbrance.

These remaining claims (63, 87, 101, 102, 104 and their dependent claims) call for “accepting bids ... at least one of the bids conditional on said bidder winning a complementary item in the second auction” and “eliminating bids which fail to satisfy any of their conditions.” In other words, a bidder can bid on a clearing right (in the first auction); that bid may be conditional on winning the complementary item (the communications license) in the second auction. The bidder may bid on the item in the first auction (the clearing right) secure in the knowledge that in the event that the bidder does not secure the communications license he will not be liable in the clearing right auction since his bid was a conditional bid.

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### THE CITED REFERENCES

#### RACKSON

The Rackson reference is entitled "Multiple Auction Coordination Method". Rackson describes a "multi-auction service" which has the stated function to:

"coordinate the auction listing, bid replication and auction management process. Typically maintains history of item bids and offers, and identifies categories for auction items. Provides means for bidders or sellers to specify parameters of the bidding and selling process such that the multi-auction service acts as an agent for either the bidder or seller to achieve an optimal bid price and set of transactions from the client's perspective." ('270, 2:36-45)

The reference identifies the subject of the patent as:

"A system and method... for coordinating an auction for an item between a multi-auction service, a plurality of remote auction services, and a plurality of bidders, all of which are interconnected by a network. The multi-auction service performs the steps of receiving selling parameters for the item to be auctioned from a seller, transmitting the parameters for the item to a plurality of remote auction services, throughout the auction detecting that a bid for the item has been received by at least one of the remote auction services, determining which of the remote auction services should receive a replicated bid, and transmitting a replicated bid to each of the remote auction services so determined. In the case where more than one remote auction service receives a bid for the item, the multi-auction service detects that a bid for the item has been received by more than one of the remote auction services, establishes which of the received bids is an optimal bid for the item, and transmits the optimal bid as the replicated bid into the remote auction services." ['270] (6:44-62).

While all of the claims call for either conducting the first auction in association with the second auction or conducting a first and a second auction, the Rackson patent does not describe conducting an auction at all. Rather, the Rackson patent describes monitoring a set of auctions which are conducted by undisclosed apparatus and methods and, at times, replicating a bid offered in one auction so that bid may appear in another auction.

Aside from not describing how an auction may be conducted, Rackson fails to describe an auction (either in association with a second auction or in addition to the second auction), which includes the feature of either "constraining the received bids by accepting only bids which satisfy a constraint based on bids in the second auction" or "accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complimentary item in the second auction" and "eliminating each of the



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conditional bids which fail to satisfy any of their conditions, and there after assigning the first set of items to bidders based on the bids in force subsequent to the eliminating of the conditional bids which fail to satisfy any of their conditions".

**Fritts, Private Property, Economic Efficiency and Inspection Policy in the Wake of C Block Auction**

Fritts describes the history of FCC auctions and draws some conclusions from that history. Pertinent to the rejection under appeal, Fritts mentions (p. 13) the FCC Simultaneous Ascending Auction (SAA) and says it has an advantage over traditional auction techniques such as sequential auctions. The text mentions that activity rules are useful to keep the auction moving forward at a good pace. The author mentions that licenses involved in the SAA may be complementary (to other licenses). The FCC is also said to be experimenting with combinatorial bidding. Fritts does not describe the Simultaneous Ascending Auction, but the reader may infer that he refers to a process in which plural licenses are put up for auction simultaneously, and in which the bidding for any single license does not conclude until the bidding for all of the licenses concludes (some assumption is necessary since there is no express description in the reference). The author does not describe the experiments with combinatorial bidding, although again the reader may infer that this refers to an auction where a bidder may identify or select some of the goods subject to auction (a package of goods) and include a price for the package.

Thus, Fritts may be said to refer to conducting an an auction (SAA) in which plural items are offered simultaneously and in which an item in the auction may be the complement to another item in the auction.

Fritts does not describe how an auction or auctions may be conducted. He does not constraints to bids in an auction, much less an auction in which bids in the auction are subject to a constraint that is based on bids in another auction. He does not mention conditional bids, much less an auction in which bids in one auction are conditioned on the bidder winning a complementary item in a different auction.

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**THE CONSTRAINING CLAIMS PATENTABLY DISTINGUISH FROM THE  
REFERENCES**

The statement of the rejection relative to the “constraining” claims (51, 75, 99, 100, 103 and their dependent claims) is found on pages 2-5 of the action. Each of these claims relates to the subject matter of constraining bids in a first auction based on bids in a second auction.

Each of these claims calls for initiating a first auction, and some of the claims also call for initiating a second auction. This subject matter is not mentioned in the statement of the rejection.

Each of these claims calls for determining whether the first auction should terminate. This subject matter is not mentioned in the statement of the rejection.

In connection with the “constraining” subject matter, the final rejection acknowledges (page 4) that Rackson “do not explicitly state constraining bids by accepting only bids which satisfy a constraint based on bids in the second auction.” The rejection alleges, however, that the secondary reference, Fritts “also teaches constraining bids by accepting only bids which satisfy a constraint based on bids in the second auction.” For support the rejection alleges that “Fritts states that “strong synergies” exists among licenses and preferences by bidders.” Firstly, the allegation that Fritts *also* teaches is unsupported, the rejection does not allege that any other reference “teaches constraining bids ... based on bids in the second auction”. Secondly, and more important, Fritts does not teach “constraining bids ... based on bids in the second auction” as claimed. The statement that is contained in Fritts concerning “strong synergies” is not the same as, similar to or even related to the constraining bids subject matter.

The rejection concludes by alleging that “it would have been obvious” allegedly “to allow bidders to bid on a first item being auctioned at a first auction and a second item being auctioned at a second auction thereby providing a system in which bidders may bid on compatible products or services in one stop or system.”

There is so much wrong with this conclusion that it is hard to know where to start.

Rackson does not suggest that that it would be advantageous “to allow bidders to bid on a first item being auctioned at a first auction and a second item being auctioned at a second auction thereby providing a system in which bidders may bid on compatible products/services in one stop or system.” Fritts does mention the FCC Simultaneous Ascending Auction (SAA) which, it

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is said, may involve complementary licenses. Even if we assume that the examiner's allegation is supported, what does that allegation have to do with the subject matter of the claims? It is not at all necessary in providing a system allowing bidders to bid on compatible products or services to require constraining bids in any fashion. The constraining subject matter has no relation to the teachings of Rackson (as is admitted on the top of page 4 of the rejection) nor of Fritts. Contrary to the allegation in the rejection, Fritts does not teach "constraining bids..." The statement of Fritts that synergies may exist is not the same as, or similar to, or even related to "constraining" bids in any fashion. Further, the claimed subject matter is even more specific, i.e., the claims require the bids in one auction to be constrained based on bids in another auction. Not only is there nothing in either reference about constraining bids in one auction based on bids in another auction, there is nothing in the action about this subject matter (other than the naked conclusion that the subject matter "would have been obvious").

Applicant submits that the rejection of claims 51, 75, 99, 100 and 103, and the claims dependent thereon (the constraining claims) is not well taken because

1. Neither reference teaches constraining bids in one auction based on bids in a second auction;
2. the allegation of obviousness is inadequate to reach the claimed subject matter; and
3. the allegation of obviousness is not based on either Rackson or Fritts.

**The Conditional Bid Claims Patentably Distinguish from the References**

The rejection of the remaining claims (claims 60-87, 101, 102, 104 and the claims dependent thereon-the conditional claims) appears to be stated at the bottom of page 5 of the office action. After calling out the claims, the rejection alleges that "these claims contains features recited in the claims 51-60 and these claims are rejected under a similar rationale applied therein".

However, claims 63, 87, 101, 102, 104 and the claims dependent thereon recite that the bids include at least one conditional bid, conditioned on a bidder winning a complementary item in the second auction and eliminating each of the conditional bids which fail to satisfy any of their conditions. This subject matter is not found in any of claims 51-60. The last paragraph on

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page 5 of the rejection mentions the subject matter calling for “eliminating each of the conditional bids...”. In that connection, the rejection continues by stating both Rackson and Fritts “discuss various bidding rules”. The Examiner asserts that “if a conditional bid does not satisfy a certain bidding rule or requirement, eliminating each of the conditional bids which fail to satisfy certain conditions and thereafter assigning the first set of items to bidders based on bids in force subsequent to the eliminating function would have been obvious to one of ordinary skill in the art to do because only bidders satisfying all requirements and while placing a proper bid would have been awarded the bidden items”.

In the first place, the statement of the rejection fails to even allege that either reference describes the eliminating subject matter (and in fact neither reference discloses conditional bids or the eliminating subject matter). In addition, the statement of rejection fails to allege that either of the references refer to conditional bids in any way. The Examiner’s assertion that “if a conditional bid does not satisfy a certain bidding rule or requirement, eliminating each of the conditional bids” would have been obvious is tantamount to *assuming* that conditional bids as recited in these claims is part of the prior art. It should not require the citation of authority to establish that assuming the claimed subject matter is part the prior art without citing a reference is simply error.

Applicant asserts that neither of the cited references mentions or even hints at conditional bids, much less bids in one auction which are conditioned on the outcome of another auction.

Applicant submits the fact that neither reference describes conditional bids or eliminating from consideration conditional bids which fail to satisfy their condition, establishes that claims 63, 87, 101, 102, 104 and the claims dependent thereon are patentable over the cited art. Moreover, there is not even an allegation in the final rejection to the effect that either reference describes a conditional bid or that either reference describes eliminating conditional bids which fail to satisfy their condition. The reasoning offered in the Action *assumes* that bids may be conditioned, this is tantamount to *assuming* the invention is anticipated; this is not a proper obviousness rejection. The rejection fails to present a prima facie case of obviousness.

While there are additional grounds by which the claimed subject matter distinguishes from the rejection and/or the cited references, Applicant does not believe it is necessary to further belabor the point.

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On the foregoing basis, Applicant submits that claims 63, 87, 101, 102 and 104 and the claims dependent thereon are clearly patentable to Applicant.

In view of all of the foregoing, Applicant requests reversal of the rejection of each of the claims pending in the application.

#### VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

#### IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

#### X. RELATED PROCEEDINGS

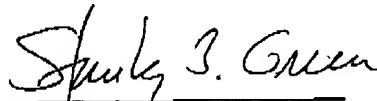
No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 21736-00011-US from which the undersigned is authorized to draw.

Dated:

Respectfully submitted,

By



Stanley B. Green

Registration No.: 24,351

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OCT 26 2006

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**APPENDIX A****Claims Involved in the Appeal of Application Serial No. 09/740,930**

1. – 50. (cancelled)

51. A method for conducting a first auction of a first set of items, said first auction conducted in association with a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in the first auction, the method comprising:

- a) initiating the first auction by identifying the first set of items,
- b) receiving bids from bidders for items in the first set of items,
- c) constraining the received bids by accepting only bids which satisfy a constraint based on bids in the second auction,
- d) determining whether the first auction should terminate,
- e) repeating b), c) and d) until the first auction is terminated, and
- f) assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

52. The method of claim 51 wherein the first auction is a computer-implemented and occurs at the same time as the second auction.

53. The method of claim 51 wherein the first auction is a computer-implemented auction and occurs after the second auction.

54. The method of claim 51 wherein items in the second set are communication licenses and items in the first set are clearing rights related to communications licenses.

55. The method of claim 51 wherein items in the first set are communication licenses and items in the second set are clearing rights related to communications licenses.

56. The method of claim 51 wherein items in the second set are related to airport landing rights.

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57. The method of claim 51 wherein items in the first set are related to airport landing rights.

58. The method of claim 51 wherein each item in the first set is related to an item in the second set.

59. The method of claim 58 which includes assigning each item in the first set to the successful bidder for the related item in the second set.

60. The method of claim 51 wherein each item in the first set is complementary to an item in the second set.

61. The method of claim 51 wherein step d) terminates the first auction in the event that no new bids were submitted and wherein step d) also provides new bidding information to bidders in the event that the first auction is not terminated.

62. The method of claim 51 wherein step f) is limited to selected bidders.

63. A method for conducting a first auction of a first set of items, said first auction conducted in association with a second auction of a second set of items, said first set of items being different from said second set of items, at least one item in the first set having a complementary item in the second set, at least two bidders participating in the first auction, the method comprising:

- a) initiating the first auction by identifying the first set of items,
- b) accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,
- c) determining whether the first auction should terminate,
- d) repeating b) and c) until the first auction is terminated, and
- e) eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force subsequent to the eliminating of the conditional bids which fail to satisfy any of their conditions .

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64. The method of claim 63 wherein the first auction is a computer-implemented and occurs at the same time as the second auction.

65. The method of claim 63 wherein the first auction is a computer-implemented and occurs after the second auction.

66. The method of claim 63 wherein items in the second set are communication licenses and items in the first set are clearing rights related to communications licenses.

67. The method of claim 63 wherein items in the first set are communication licenses and items in the second set are clearing rights related to communications licenses.

68. The method of claim 63 wherein items in the second set are related to airport landing rights.

69. The method of claim 63 wherein items in the first set are related to airport landing rights.

70. The method of claim 63 wherein each item in the first set is related to an item in the second set.

71. The method of claim 70 which includes assigning each item in the first set to the successful bidder for the related item in the second set.

72. The method of claim 63 wherein each item in the first set is complementary to an item in the second set.

73. The method of claim 63 wherein step c) terminates the first auction in the event that no new bids were submitted and wherein step c) also provides new bidding information to bidders in the event that the first auction is not terminated.

74. The method of claim 63 wherein step e) is limited to selected bidders.



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75. A system for conducting a first auction of a first set of items, said auction conducted in association with a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in the first auction, the system comprising:

- a) means for initiating the first auction by identifying the first set of items,
- b) means for inputting bids from bidders for items in the first set of items,
- c) means for constraining the inputted bids by accepting only bids which satisfy a constraint, based on bids for the second set of items in the second auction,
- d) means for determining whether the first auction should terminate,
- e) means for repeating the inputting, constraining and determining until the first auction is terminated, and
- f) means for assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

76. The system of claim 75 wherein the first auction is a computer-implemented auction and occurs at the same time as the second auction.

77. The system of claim 75 wherein the first auction is a computer-implemented auction and occurs after the second auction.

78. The system of claim 75 wherein items in the second set are communication licenses and items in the first set are clearing rights related to communications licenses.

79. The system of claim 75 wherein items in the first set are communication licenses and items in the second set are clearing rights related to communications licenses.

80. The system of claim 75 wherein items in the second set are related to airport landing rights.

81. The system of claim 75 wherein items in the first set are related to airport landing rights.

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82. The system of claim 75 wherein each item in the first set is related to an item in the second set.

83. The system of claim 82 which includes means for assigning each item in the first set to the successful bidder for the related item in the second set.

84. The system of claim 75 wherein each item in the first set is complementary to an item in the second set.

85. The system of claim 75 wherein the means for determining terminates the first auction in the event that no new bids were submitted and further includes means for providing new bidding information to bidders in the event that the first auction is not terminated.

86. The system of claim 75 wherein said means for assigning is limited to operating with selected bidders.

87. A system for conducting a first auction of a first set of items, said auction conducted in association with a second auction of a second set of items, said first set of items being different from said second set of items, at least one item in the first set having a complementary item in the second set, at least two bidders participating in the first auction, the system comprising:

- a) means for initiating the first auction by identifying the first set of items,
- b) means for inputting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,
- c) means for determining whether the first auction should terminate,
- d) means for repeating the inputting and determining until the first auction is terminated, and
- e) means for eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force subsequent to the eliminating of the conditional bids which fail to satisfy any of their conditions.

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88. The system of claim 87 wherein the first auction is a computer-implemented auction and occurs at the same time as the related auction.

89. The system of claim 87 wherein the first auction is a computer-implemented auction and occurs after the second auction.

90. The system of claim 87 wherein items in the second set are communication licenses and items in the first set are clearing rights related to communications licenses.

91. The system of claim 87 wherein items in the first set are communication licenses and items in the second set are clearing rights related to communications licenses.

92. The system of claim 87 wherein items in the second set are related to airport landing rights.

93. The system of claim 87 wherein items in the first set are related to airport landing rights.

94. The system of claim 87 wherein each item in the first set is related to an item in the second set.

95. The system of claim 94 which includes means for assigning each item in the first set to the successful bidder for the related item in the second set.

96. The method of claim 87 wherein each item in the first set is complementary to an item in the second set.

97. The system of claim 87 wherein said means for determining terminates the first auction in the event that no new bids were submitted and said means for determining further includes means for providing new bidding information to bidders in the event that the first auction is not terminated.

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98. The system of claim 87 wherein said means for assigning is limited to operation with selected bidders.

99. A method for conducting a first auction of a first set of items, and a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in both the auctions, the method comprising:

- a) initiating the first auction by identifying the first set of items,
- b) initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) receiving bids from bidders for items in the first set of items in the first auction,
- d) constraining the received bids in the first auction by accepting only bids which satisfy a constraint based on bids for the second set of items in the second auction,
- e) determining whether the first auction should terminate,
- f) repeating c), d) and e) until the first auction is terminated, and
- g) assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

100. A system for conducting a first auction of a first set of items, and a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in both the auctions, the system comprising:

- a) means for initiating the first auction by identifying the first set of items,
- b) means for initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) means for inputting bids from bidders for items in the first set of items in the first,
- d) means for constraining the inputted bids in the first auction by accepting only bids which satisfy a constraint based on bids for the second set of items in the second auction,
- e) means for determining whether the first auction should terminate,
- f) means for repeating c), d) and e) until the first auction is terminated, and
- g) means for assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

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101. A method for conducting a first auction of a first set of items and a second auction of a second set of items, said first set of items being different from said second set of items, at least one item in the first set having a complementary item in the second set, at least two bidders participating in the auctions, the method comprising:

- a) initiating the first auction by identifying the first set of items,
- b) initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) receiving bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,
- d) determining whether the first auction should terminate,
- e) repeating c) and d) until the first auction is terminated, and
- f) ) eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

102. A system for conducting a first auction of a first set of items and a second auction of a second set of items, said first set of items being different from said second set of items, at least one item in the first set having a complementary item in the second set, at least two bidders participating in the auctions, the system comprising:

- a) means for initiating the first auction by identifying the first set of items,
- b) means for initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) means for accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,
- d) means for determining whether the first auction should terminate,
- e) means for repeating c) and d) until the first auction is terminated, and

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f) means for eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

103. A computer system for conducting a first auction of a first set of items, and a second auction of a second set of items, said first set of items being different from said second set of items, at least two bidders participating in both the auctions, the computer system:

- a) initiating the first auction by identifying the first set of items,
- b) initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) receiving bids from bidders for items in the first set of items in the first auction,
- d) constraining the received bids in the first auction by accepting only bids which satisfy a constraint based on bids for the second set of items in the second auction,
- e) determining whether the first auction should terminate,
- f) repeating c), d) and e) until the first auction is terminated, and
- g) assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.

104. A computer system for conducting a first auction of a first set of items and a second auction of a second set of items, said first set of items being different from said second set of items, at least one item in the first set having a complementary item in the second set, at least two bidders participating in the auctions, the computer system:

- a) initiating the first auction by identifying the first set of items,
- b) initiating the second auction by identifying the second set of items and accepting bids therefor,
- c) accepting bids from bidders for items in the first set of items, at least one of the bids from one of the bidders conditional on said bidder winning a complementary item in the second auction,
- d) determining whether the first auction should terminate,
- e) repeating c) and d) until the first auction is terminated, and

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f) eliminating each of the conditional bids which fail to satisfy any of their conditions, and thereafter assigning the first set of items to bidders based on the bids in force at the time the first auction was terminated.